AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present application.

1.   (Original) A granite block cut into slabs by a sawing device comprising a plurality of generally parallel, spaced-apart blades with each of the blades having a plurality of cutting segments mounted thereon, each of the cutting segments comprising a continuous phase impregnated with a superabrasive material selected from one of natural diamond, synthetic diamond, cubic boron nitride, and combinations thereof;

wherein each of the granite slabs as cut from the block has a surface roughness R_a of less than 1000 μ-in.

2.   (Original) The as-cut granite slabs of claim 1, wherein each of the as-cut granite slabs has a surface roughness R_a of less than 500 μ-in.

3.   (Original) The as-cut granite slabs of claim 1, wherein each of the as-cut granite slabs has a mean thickness variation of less than 20% of the thickness of a nominal slab target.

4.   (Original) The as-cut granite slabs of claim 3, wherein each of the as-cut granite slabs has a mean thickness variation of less than 10% of the thickness of a nominal slab target.

5.   (Currently Amended) The as-cut granite slabs of claim 1, wherein each of the as-cut granite slabs has an ISO 10-point height parameter R_z of less than 10,000 ~~μ-in~~ μ-in. and a maximum peak-to-valley height R_{max} of less than 10,000 μ-in.

6.   (Currently Amended) The as-cut granite slabs of claim 5, wherein each of the as-cut granite slabs has an ISO 10-point height parameter R_z of less than 5,000 ~~μ-in~~ μ-in. and a maximum peak-to-valley height R_{max} of less than 5,000 ~~μ-in~~ μ-in.

7.   (Currently Amended) The as-cut granite slabs of claim 6, wherein each of the as-cut granite slabs has an ISO 10-point height parameter R_z of less than 4,000 ~~μ-in~~ μ-in. and a maximum peak-to-valley height R_{max} of less than 4,000 ~~μ-in~~ μ-in.

8.   (Currently Amended) A method for cutting a granite block into slabs, said method ~~comprises~~ comprising the ~~step~~ steps of ~~subjecting said block to a cutting device comprising~~:

providing a granite block;

cutting said granite block with a cutting device, the cutting device comprising:

a plurality of generally parallel, spaced-apart blades, with each of the blades having a plurality of cutting segments mounted thereon,

each of the segments being spaced apart from one another by a center-to-center distance,

each of the segments comprising a continuous phase impregnated with a superabrasive material selected from one of natural diamond, synthetic diamond, cubic boron nitride, and combinations thereof; wherein there is a spacing variation of at least 1 mm between a maximum center-to-center distance and a minimum center-to-center distance of the ~~segments~~; and

~~wherein each of the granite slabs as cut from the block by said cutting device has a surface roughness R_a of less than 1000 μ-in.~~

producing granite slabs from the granite block by said cutting device, each granite slab having a surface roughness R_a of less than 1000 μ-in.

9.   (Original) The method of claim 8, wherein each of the as-cut granite slabs has a surface roughness R_a of less than 500 μ-in.

10.   (Original) The method of claim 8, wherein each of the as-cut granite slabs has a mean thickness variation of less than 20% of the thickness of a nominal slab target.

11.   (Original) The method of claim 10, wherein each of the as-cut granite slabs has a mean thickness variation of less than 10% of the thickness of a nominal slab target.

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12.   (Currently Amended) The method of claim 8, wherein each of the as-cut granite slabs has an ISO 10-point height parameter R_z of less than 10,000 ~~μ-in~~ μ-in. and a maximum peak-to-valley height R_{max} of less than 10,000 μ-in.

13.   (Currently Amended) The method of claim 12, wherein each of the as-cut granite slabs has an ISO 10-point height parameter R_z of less than 5,000 ~~μ-in~~ μ-in. and a maximum peak-to-valley height R_{max} of less than 5,000 ~~μ-in~~ μ-in.

14.   (Currently Amended) The method of claim 13, wherein each of the as-cut granite slabs has an ISO 10-point height parameter R_z of less than 4,000 ~~μ-in~~ μ-in. and a maximum peak-to-valley height R_{max} of less than 4,000 ~~μ-in~~ μ-in.

15.   (Currently Amended) A method for cutting a granite block into slabs, ~~with the as-cut granite slabs having an as-cut surface roughness R_a of less than 1000 μ-in, and a mean thickness variation of less than 20% of the thickness of a nominal slab target, by employing a cutting~~ device comprising the steps of:

    providing a granite slab;

    cutting the granite slab with a cutting device, the cutting device comprising:

    a plurality of generally parallel, spaced-apart blades with each of the blades having a plurality of cutting segments mounted thereon,

    each of the cutting segments comprising a continuous phase impregnated with a superabrasive material selected from one of natural diamond, synthetic diamond, cubic boron nitride, and combinations thereof;

    each of the cutting segments having a wear resistance property varying at least 10% from at least another segment mounted on the same blade, wherein the varied wear resistance property is selected from the group of a) center-to-center spacing of the segments along the length of the blade; b) concentration of superabrasive materials in each segment; c) grade of superabrasive materials in each segment as measured by its compressive fracture

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strength; d) composition of superabrasive materials in each segment; and e) length of the segment; and

producing granite slabs wherein the granite slabs have an as-cut surface roughness R_a of less than 1000 μ-in., and a mean thickness variation of less than 20% of the thickness of a nominal slab target.

16.   (Currently Amended) The method of claim 15, wherein the as-cut granite slabs have a mean thickness variation of less than 10% of the thickness of a nominal slab target.

17.   (Currently Amended) The method of claim 15, wherein each of the as-cut granite slabs has an ISO 10-point height parameter R_z of less than 10,000 ~~μ-in~~ μ-in. and a maximum peak-to-valley height R_{max} of less than 10,000 μ-in.

18.   (Currently Amended) The method of claim ~~13~~ 15, wherein each of the as-cut granite slabs has an ISO 10-point height parameter R_z of less than 4,000 ~~μ-in~~ μ-in. and a maximum peak-to-valley height R_{max} of less than 4,000 ~~μ-in~~ μ-in.

19.   (Currently Amended) A method for cutting a granite block into slabs with an excess cut width (t_{xs}) of less than 2 mm, said method ~~comprises~~ comprising the ~~steps~~ step of ~~subjecting said granite block to a cutting device comprising~~:

providing a granite block:

cutting said granite block with a cutting device, the cutting device comprising:

a plurality of generally parallel, spaced-apart blades with each of the blades having a plurality of cutting segments mounted thereon, and

each of the cutting segments comprising a continuous phase impregnated with a superabrasive material selected from one of natural diamond, synthetic diamond, cubic boron nitride, and combinations thereof; and

producing granite slabs.

20.   (Original) The method of claim 19, wherein said excess cut width (t_{xs}) is less than 1mm.